

INVENTOR SEARCH

=> d ibib abs ind hitstr l11 1-2

L11 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:523307 HCAPLUS Full-text

DOCUMENT NUMBER: 143:48035

TITLE: A composition comprising an extract of a plant in the family Cucurbitaceae or a purified extract isolated therefrom having anti-adipogenic and anti-obesity activity

INVENTOR(S): Jin, Mi Rim; Ryu, Jae Ha; Choi, Hyoun Jeong; Jung, Hyung Jin; Park, Kyoung Chul ; Kim, Sun Young

PATENT ASSIGNEE(S): Pangenomics Co., Ltd., S. Korea

SOURCE: PCT Int. Appl., 38 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005053723	A1	20050616	WO 2004-KR3168	20041203
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
KR 2005054009	A	20050610	KR 2003-87280	20031203
EP 1706124	A1	20061004	EP 2004-808299	20041203
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS				
CN 1901926	A	20070124	CN 2004-80036017	20041203
JP 2007513150	T	20070524	JP 2006-542501	20041203
US 2007110833	A1	20070517	US 2006-581575	20060602
PRIORITY APPLN. INFO.:			KR 2003-87280	A 20031203
			WO 2004-KR3168	W 20041203

AB The present invention is related to an extract of a plant in the family Cucurbitaceae or a purified extract isolated therefrom having anti-adipogenic and anti-obesity activity, and a composition comprising the same. The extract of Cucurbitaceae family plant of the present invention showed potent reducing activity of body weight, decreasing effect on the blood triglyceride and cholesterol level, activating activity of PPAR alpha and delta, reducing activity of the gene expression of stearoyl-CoA desaturase, and preventing activity from the adipogenesis of precursor fat cells with no toxicity, therefore, those extract can be useful in treating or preventing obesity and adipogenesis-involved diseases as a medicine or health care food.

IC ICM A61K035-78

CC 63-4 (Pharmaceuticals)

Section cross-reference(s): 1, 17

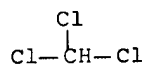
ST Cucurbitaceae plant ext obesity antiobesity pumpkin watermelon

- cucumber gourd
- IT Peroxisome proliferator-activated receptors
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (activation of; anti-adipogenic and anti-obesity composition comprising an
 extract of a plant in the family Cucurbitaceae)
- IT Antidiabetic agents
 Antiobesity agents
 Atherosclerosis
 Beverages
 Cardiovascular agents
 Cardiovascular system, disease
 Citrullus lanatus
 Cucumis sativus
 Cucurbita moschata
 Cucurbitaceae
 Extraction
 Hypolipemic agents
 Lagenaria siceraria depressa
 Luffa cylindrica
 Obesity
 (anti-adipogenic and anti-obesity composition comprising an extract of a
 plant in the family Cucurbitaceae)
- IT Hyperlipidemia
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (anti-adipogenic and anti-obesity composition comprising an extract of a
 plant in the family Cucurbitaceae)
- IT Leaf
 Stem
 (extract of; anti-adipogenic and anti-obesity composition comprising an
 extract of a plant in the family Cucurbitaceae)
- IT Diabetes mellitus
 (non-insulin-dependent; anti-adipogenic and anti-obesity composition
 comprising an extract of a plant in the family Cucurbitaceae)
- IT Disease, animal
 (steatosis; anti-adipogenic and anti-obesity composition comprising an
 extract of a plant in the family Cucurbitaceae)
- IT 67-66-3, Chloroform, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (anti-adipogenic and anti-obesity composition comprising an extract of a
 plant in the family Cucurbitaceae)
- IT 9014-34-0, Stearoyl coa desaturase
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (inhibition of; anti-adipogenic and anti-obesity composition comprising an
 extract of a plant in the family Cucurbitaceae)
- IT 67-56-1, Methanol, uses 71-36-3, Butanol, uses
 75-09-2, Dichloromethane, uses 110-54-3, Hexane, uses
 141-78-6, Ethylacetate, uses 7732-18-5, Water, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (solvent; anti-adipogenic and anti-obesity composition comprising an
 extract of a plant in the family Cucurbitaceae)
- IT 67-66-3, Chloroform, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (anti-adipogenic and anti-obesity composition comprising an extract of a
 plant in the family Cucurbitaceae)

in the family Cucurbitaceae)

RN 67-66-3 HCAPLUS

CN Methane, trichloro- (CA INDEX NAME)



IT 9014-34-0, Stearoyl coa desaturase

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(inhibition of; anti-adipogenic and anti-obesity composition comprising an extract of a plant in the family Cucurbitaceae)

RN 9014-34-0 HCAPLUS

CN Desaturase, acyl coenzyme A (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 67-56-1, Methanol, uses 71-36-3, Butanol, uses

75-09-2, Dichloromethane, uses 110-54-3, Hexane, uses

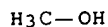
141-78-6, Ethylacetate, uses 7732-18-5, Water, uses

RL: NUU (Other use, unclassified); USES (Uses)

(solvent; anti-adipogenic and anti-obesity composition comprising an extract of a plant in the family Cucurbitaceae)

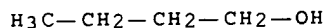
RN 67-56-1 HCAPLUS

CN Methanol (CA INDEX NAME)



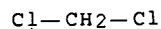
RN 71-36-3 HCAPLUS

CN 1-Butanol, (CA INDEX NAME)



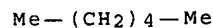
RN 75-09-2 HCAPLUS

CN Methane, dichloro- (CA INDEX NAME)



RN 110-54-3 HCAPLUS

CN Hexane (CA INDEX NAME)



RN 141-78-6 HCAPLUS

CN Acetic acid ethyl ester (CA INDEX NAME)

Et-O-Ac

RN 7732-18-5 HCAPLUS
CN Water (CA INDEX NAME)

H₂O

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

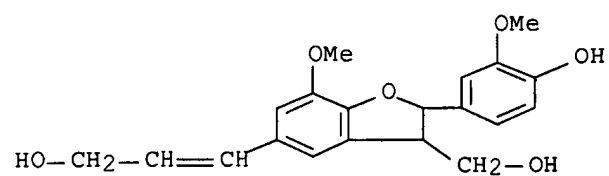
L11 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:523272 HCAPLUS Full-text
DOCUMENT NUMBER: 143:48034
TITLE: Composition comprising an alcohol compound isolated
from plants of the family Cucurbitaceae
having anti-adipogenic and anti-obesity activity
INVENTOR(S): Jin, Mi Rim; Ryu, Jae Ha; Choi, Hyoun
Jeong; Jung, Hyung Jin; Park, Kyoung Chul
; Kim, Sun Young
PATENT ASSIGNEE(S): Pangenomics Co., Ltd., S. Korea
SOURCE: PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005053675	A1	20050616	WO 2004-KR3169	20041203
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
KR 2005054006	A	20050610	KR 2003-87275	20031203
JP 2007515407	T	20070614	JP 2006-542502	20041203
US 2007110834	A1	20070517	US 2006-581576	20060602
PRIORITY APPLN. INFO.:			KR 2003-87275	A 20031203
			WO 2004-KR3169	W 20041203
AB The present invention is related to an alc. compound, dehydrodiconiferyl alc., isolated from Cucurbitaceae family plants having anti-adipogenic and anti- obesity activity, and a composition comprising the same. The compound showed potent reducing activity of body weight, decreasing effect on the blood triglyceride and cholesterol level, activating activity of PPAR alpha and preventing activity from the adipogenesis of precursor fat cells with no				

toxicity. Therefore, those compds. can be useful in treating or preventing obesity and adipogenesis-involved diseases as a medicine or health care food.

- IC ICM A61K031-343
ICS A61P003-04; A23L001-29
- CC 63-4 (Pharmaceuticals)
Section cross-reference(s): 1, 17
- ST Cucurbitaceae dehydrodiconiferyl alc antiobesity agent
- IT Antiobesity agents
Atherosclerosis
Beverages
Cardiovascular agents
Cardiovascular system, disease
Citrullus lanatus
Cucumis sativus
Cucurbita moschata
Cucurbitaceae
Dietary supplements
Hypolipemic agents
Lagenaria siceraria depressa
Leaf
Luffa cylindrica
Obesity
Stem
(alc. compound isolated from plants of the family Cucurbitaceae having anti-adipogenic and anti-obesity activity)
- IT Hyperlipidemia
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(alc. compound isolated from plants of the family Cucurbitaceae having anti-adipogenic and anti-obesity activity)
- IT Antiarteriosclerotics
(antiatherosclerotics; alc. compound isolated from plants of the family Cucurbitaceae having anti-adipogenic and anti-obesity activity)
- IT Diabetes mellitus
(non-insulin-dependent; alc. compound isolated from plants of the family Cucurbitaceae having anti-adipogenic and anti-obesity activity)
- IT Disease, animal
(steatosis; alc. compound isolated from plants of the family Cucurbitaceae having anti-adipogenic and anti-obesity activity)
- IT 4263-87-0, Dehydrodiconiferyl alcohol
RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(alc. compound isolated from plants of the family Cucurbitaceae having anti-adipogenic and anti-obesity activity)
- IT 4263-87-0, Dehydrodiconiferyl alcohol
RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(alc. compound isolated from plants of the family Cucurbitaceae having anti-adipogenic and anti-obesity activity)
- RN 4263-87-0 HCAPLUS
- CN 3-Benzofuranmethanol, 2,3-dihydro-2-(4-hydroxy-3-methoxyphenyl)-5-(3-hydroxy-1-propen-1-yl)-7-methoxy- (CA INDEX NAME)

10/581,576



REFERENCE COUNT:

5

THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

REQUESTED COMPOUND (please note, search request showed 4-hydroxy- compound w/o 3-methoxy group).

=> d 113

L13 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2007 ACS on STN

RN 4263-87-0 REGISTRY

ED Entered STN: 16 Nov 1984

CN 3-Benzofuranmethanol, 2,3-dihydro-2-(4-hydroxy-3-methoxyphenyl)-5-(3-hydroxy-1-propen-1-yl)-7-methoxy- (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 3-Benzofuranmethanol, 2,3-dihydro-2-(4-hydroxy-3-methoxyphenyl)-5-(3-hydroxy-1-propenyl)-7-methoxy- (9CI)

CN 3-Benzofuranmethanol, 2,3-dihydro-2-(4-hydroxy-3-methoxyphenyl)-5-(3-hydroxypropenyl)-7-methoxy- (6CI, 7CI, 8CI)

OTHER NAMES:

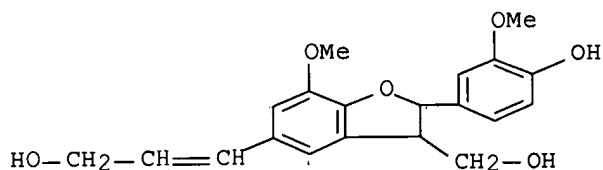
CN Coniferyl alcohol, dehydrodi-

CN Dehydrodiconiferyl alcohol

CN Diconiferyl alcohol, dehydro-

MF C20 H22 O6

LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMINFORMRX, MEDLINE, PIRA, SPECINFO, TOXCENTER
(*File contains numerically searchable property data)



9+5-2822

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

112 REFERENCES IN FILE CA (1907 TO DATE)

4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

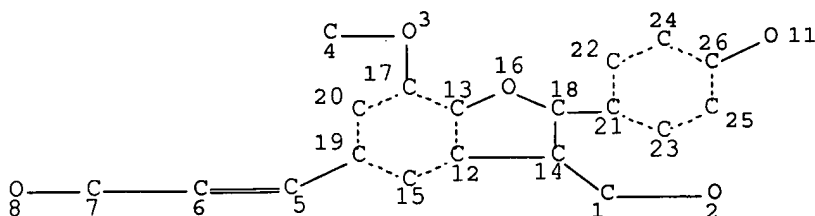
113 REFERENCES IN FILE CAPLUS (1907 TO DATE)

11 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

ED Entered STN: 16 Nov 1984

RESULTS FROM REGISTRY, CAPLUS, AND USPATFULL

=> d que stat l21
L14 , STR



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 24

STEREO ATTRIBUTES: NONE

L16 191 SEA FILE=REGISTRY SSS FUL L14
L17 398 SEA FILE=HCAPLUS ABB=ON L16 OR ?DEHYDRODICONIFERYL?(W)?ALCOHOL
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L18 3 SEA FILE=HCAPLUS ABB=ON L17 AND (?OBES? OR ?TYPE?(W)(2 OR
II)(W)?DIABETES? OR ?STEATOSIS? OR ?HYPERLIPEMIA? OR ?CARD?(W)?
DISEAS? OR ?ATHEROSCLEROSIS?)
L19 3 SEA FILE=HCAPLUS ABB=ON L18 AND (PRD<20060602 OR PD<20060602)
L20 6 SEA FILE=USPATFULL ABB=ON L18 AND (PRD<20060602 OR PD<20060602
)
L21 9 DUP REMOV L19 L20 (0 DUPLICATES REMOVED)

=> d ibib abs hitstr l21 1-9

L21 ANSWER 1 OF 9 USPATFULL on STN

ACCESSION NUMBER: 2007:127486 USPATFULL Full-text

TITLE: Composition comprising the alcohol compound isolated
from the extract of cucurbitaceae family plant having
anti-adipogenic and anti-obesity activity

INVENTOR(S): Jin, Mi Rim, Seoul, KOREA, REPUBLIC OF
Ryu, Jae Ha, Seoul, KOREA, REPUBLIC OF
Choi, Hyoun Jeong, Incheon, KOREA, REPUBLIC OF
Jung, Hyun Jin, Seoul, KOREA, REPUBLIC OF
Park, Kyoung Chul, Seoul, KOREA, REPUBLIC OF
Kim, Sun Young, Seoul, KOREA, REPUBLIC OF

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2007110834	A1	20070517
APPLICATION INFO.:	US 2004-581576	A1	20041203 (10)
	WO 2004-KR3169		20041203
			20060602 PCT 371 date

NUMBER	DATE
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PRIORITY INFORMATION: KR 2003-81275 20031203 <--
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: KIRK HAHN, 14431 HOLT AVE, SANTA ANA, CA, 92705, US
NUMBER OF CLAIMS: 6
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 2 Drawing Page(s)
LINE COUNT: 696

AB The present invention is related to an alcohol compound isolated from the extract of Cucurbitaceae family plant having anti-adipogenic and anti-obesity activity, and a composition comprising the same. The compound showed potent reducing activity of body weight, decreasing effect on the blood triglyceride and cholesterol level, activating activity of PPAR alpha and preventing activity from the adipogenesis of precursor fat cells with no toxicity, therefore, those compound can be useful in treating or preventing obesity and adipogenesis-involved diseases as a medicine or health care food.

L21 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:523272 HCAPLUS Full-text

DOCUMENT NUMBER: 143:48034

TITLE: Composition comprising an alcohol compound isolated from plants of the family Cucurbitaceae having anti-adipogenic and anti-obesity activity

INVENTOR(S): Jin, Mi Rim; Ryu, Jae Ha; Choi, Hyoun Jeong; Jung, Hyung Jin; Park, Kyoung Chul; Kim, Sun Young

PATENT ASSIGNEE(S): Pangenomics Co., Ltd., S. Korea

SOURCE: PCT Int. Appl., 23 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005053675	A1	20050616	WO 2004-KR3169	20041203 <--
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
KR 2005054006	A	20050610	KR 2003-87275	20031203 <--
JP 2007515407	T	20070614	JP 2006-542502	20041203 <--
US 2007110834	A1	20070517	US 2006-581576	20060602 <--
PRIORITY APPLN. INFO.:			KR 2003-87275	A 20031203 <--
			WO 2004-KR3169	W 20041203 <--

AB The present invention is related to an alc. compound, dehydridiconiferyl alc., isolated from Cucurbitaceae family plants having anti-adipogenic and anti-obesity activity, and a composition comprising the same. The compound showed potent reducing activity of body weight, decreasing effect on the blood

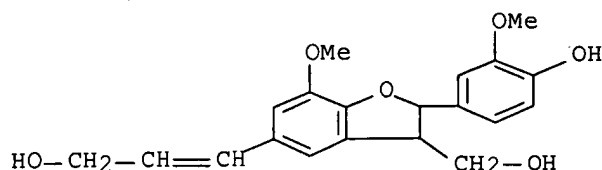
triglyceride and cholesterol level, activating activity of PPAR alpha and preventing activity from the adipogenesis of precursor fat cells with no toxicity. Therefore, those compds. can be useful in treating or preventing obesity and adipogenesis-involved diseases as a medicine or health care food.

IT 4263-87-0, Dehydroniciferyl alcohol

RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(alc. compound isolated from plants of the family Cucurbitaceae having anti-adipogenic and anti-obesity activity)

RN 4263-87-0 HCAPLUS

CN 3-Benzofuranmethanol, 2,3-dihydro-2-(4-hydroxy-3-methoxyphenyl)-5-(3-hydroxy-1-propen-1-yl)-7-methoxy- (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 3 OF 9 USPATFULL on STN

ACCESSION NUMBER: 2005:100793 USPATFULL Full-text

TITLE: Method to produce para-hydroxybenzoic acid in the stem tissue of green plants by using a tissue-specific promoter

INVENTOR(S): Meyer, Knut, Wilmington, DE, UNITED STATES
Dhugga, Kanwarpal S., Johnston, IA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005086712	A1	20050421
	US 7238512	B2	20070703
APPLICATION INFO.:	US 2003-688745	A1	20031017 (10)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	E I DU PONT DE NEMOURS AND COMPANY, LEGAL PATENT RECORDS CENTER, BARLEY MILL PLAZA 25/1128, 4417 LANCASTER PIKE, WILMINGTON, DE, 19805, US		
NUMBER OF CLAIMS:	24		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	8 Drawing Page(s)		
LINE COUNT:	5501		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention relates to methods and materials to produce para-hydroxybenzoic acid in the stem tissue of transgenic green plants using a cellulose synthase promoter to operably express a gene encoding HCHL.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L21 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:202858 HCAPLUS Full-text

DOCUMENT NUMBER: 142:430056

TITLE: Structural modification of phenylpropanoid-derived compounds and the effects on their participation in redox processes

AUTHOR(S): Russell, Wendy R.; Scobbie, Lorraine; Chesson, Andrew

CORPORATE SOURCE: Rowett Research Institute, Aberdeen, AB21 9SB, UK

SOURCE: Bioorganic & Medicinal Chemistry (2005), 13(7), 2537-2546

CODEN: BMECEP; ISSN: 0968-0896

PUBLISHER: Elsevier Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 142:430056

AB Oxidation and reduction processes are fundamental to many of the proposed mechanisms by which dietary phytochems. are thought to exert protective effects against cardiovascular disease and some cancers. An understanding of the redox chemical of these compds. is essential in assessing their potential to participate in these processes. Phenylpropanoid-derived compds. were selected and synthesized where required to represent many of the structural features found in this important group of compds. Using ESR spectroscopy and computational chemical a structure-redox activity relationship was obtained. Good correlation of computational and exptl. results was observed for the mono-hydroxylated compds. This demonstrated the value of computational chemical in obtaining information about compds., not readily available and the effect of electron delocalization on parent radical stability. For compds. containing more than one hydroxyl, the relationship was found to be more complex. The importance of quinone formation in compds. containing more than one hydroxyl substituent was highlighted, as this was found to have a significant effect on stabilization and therefore, their participation in redox processes.

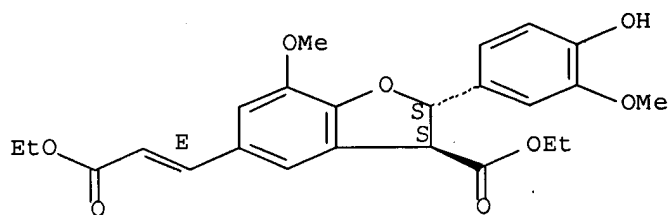
IT 160169-54-0

RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of)

RN 160169-54-0 HCAPLUS

CN 3-Benzofurancarboxylic acid, 5-[(1E)-3-ethoxy-3-oxo-1-propenyl]-2,3-dihydro-2-(4-hydroxy-3-methoxyphenyl)-7-methoxy-, ethyl ester, (2R,3R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.
Double bond geometry as shown.



REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 5 OF 9 USPATFULL on STN

ACCESSION NUMBER: 2003:267325 USPATFULL Full-text

TITLE: Compositions and methods for agrobacterium transformation of plants

INVENTOR(S): Lynn, David G., Atlanta, GA, UNITED STATES
Zhang, Jin, San Diego, CA, UNITED STATES

10/581,576

Campbell, Angela, Hatboro, PA, UNITED STATES
Binns, Andrew, Wallingford, PA, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2003188344	A1	20031002	<--
APPLICATION INFO.:	US 2000-735701	A1	20001212	(9)
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	APPLICATION			
LEGAL REPRESENTATIVE:	Steven L. Highlander, FULBRIGHT & JAWORSKI L.L.P., 600 Congress Avenue, Suite 2400, Austin, TX, 78701			
NUMBER OF CLAIMS:	46			
EXEMPLARY CLAIM:	1			
NUMBER OF DRAWINGS:	15 Drawing Page(s)			
LINE COUNT:	5166			
CAS INDEXING IS AVAILABLE FOR THIS PATENT.				

AB The present invention is directed to variants of *Agrobacterium tumefaciens*. These variants are either resistant to the effects of MDIBOA/DIMBOA, or hypersensitive to phenolic induction. These variants are improved over wild-type *Agrobacterium* in their ability to transform plant cells. Also provided are methods for their selection. In a distinct embodiment, there also is provided a modified Ti plasmid that increases the ability of an *Agrobacterium* strain to transform host cells. The plasmid contains *virA* and *virG* genes, under the control of the coliphage T5 P.sub.N25 promoter.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 167357-93-9P, Dehydrodiconiferyl ferulate 261179-38-8P,

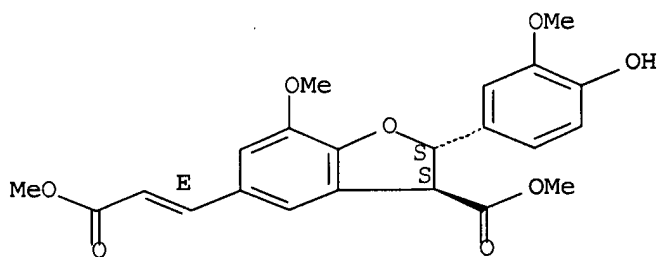
(+)-Dehydrodiconiferyl ferulate

(methods for production of *Agrobacterium tumefaciens* with enhanced DIMBOA-resistance or phenol-sensitive virulence gene expression for use in transformation of corn plants)

RN 167357-93-9 USPATFULL

CN 3-Benzofurancarboxylic acid, 2,3-dihydro-2-(4-hydroxy-3-methoxyphenyl)-7-methoxy-5-[(1E)-3-methoxy-3-oxo-1-propenyl]-, methyl ester, (2S,3S)- (9CI) (CA INDEX NAME)

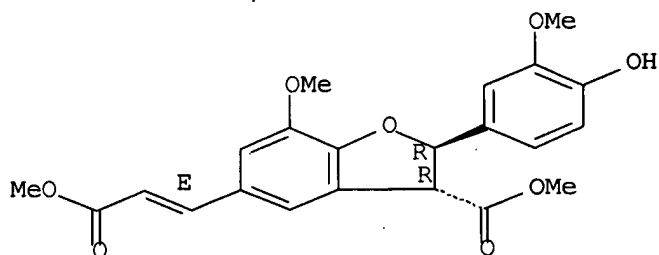
Absolute stereochemistry. Rotation (-).
Double bond geometry as shown.



RN 261179-38-8 USPATFULL

CN 3-Benzofurancarboxylic acid, 2,3-dihydro-2-(4-hydroxy-3-methoxyphenyl)-7-methoxy-5-[(1E)-3-methoxy-3-oxo-1-propenyl]-, methyl ester, (2R,3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
Double bond geometry as shown.



L21 ANSWER 6 OF 9 USPATFULL on STN

ACCESSION NUMBER: 2003:30221 USPATFULL Full-text
 TITLE: Aryl propenal double bond reductase
 INVENTOR(S): Kasahara, Hiroyuki, Wako-shi, JAPAN
 Davin, Laurence B., Pullman, WA, UNITED STATES
 Lewis, Norman G., Pullman, WA, UNITED STATES
 PATENT ASSIGNEE(S): Washington State University Research Foundation
 (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2003022168	A1	20030130	<--
	US 6703229	B2	20040309	
APPLICATION INFO.:	US 2001-820096	A1	20010327	(9)

	NUMBER	DATE	
PRIORITY INFORMATION:	US 2000-192266P	20000327	(60) <--
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	CHRISTENSEN, O'CONNOR, JOHNSON, KINDNESS, PLLC, 1420 FIFTH AVENUE, SUITE 2800, SEATTLE, WA, 98101-2347		
NUMBER OF CLAIMS:	28		
EXEMPLARY CLAIM:	1		
LINE COUNT:	1426		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB In one aspect, the present invention provides isolated nucleic acid molecules that each: (a) encode an aryl propenal double bond reductase; and (b) hybridize to a nucleic acid molecule consisting of the complement of the nucleic acid sequence set forth in SEQ ID NO:1 under defined conditions. The present invention also provides isolated aryl propenal double bond reductases. In other aspects, the present invention provides methods of enhancing or inhibiting the expression of aryl propenal double bond reductases in a plant.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L21 ANSWER 7 OF 9 USPATFULL on STN

ACCESSION NUMBER: 2003:279101 USPATFULL Full-text
 TITLE: Nucleotide sequences encoding pinorensinol/lariciresinol reductase proteins and their methods of use
 INVENTOR(S): Lewis, Norman G., Pullman, WA, United States
 Davin, Laurence B., Pullman, WA, United States
 Dinkova-Kostova, Albena T., Baltimore, MD, United States
 Fujita, Masayuki, Kita-gun, JAPAN

PATENT ASSIGNEE(S): Gang, David R., Ann Arbor, MI, United States
 Sarkanen, Simo, Minneapolis, MN, United States
 Ford, Joshua D., Pullman, WA, United States
 Washington State University Research Foundation,
 Pullman, WA, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6635459	B1	20031021	<--
APPLICATION INFO.:	US 2000-704640		20001102 (9)	
RELATED APPLN. INFO.:	Division of Ser. No. US 1999-475316, filed on 30 Dec 1999, now patented, Pat. No. US 6210942 Continuation-in-part of Ser. No. US 307653, now abandoned			

	NUMBER	DATE	
PRIORITY INFORMATION:	US 1997-54380P	19970731 (60)	<--
	US 1996-30522P	19961108 (60)	<--
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	GRANTED		
PRIMARY EXAMINER:	Achutamurthy, Ponnathapu		
ASSISTANT EXAMINER:	Kerr, Kathleen M		
LEGAL REPRESENTATIVE:	Christensen O'Connor Johnson Kindness PLLC		
NUMBER OF CLAIMS:	21		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	1 Drawing Figure(s); 1 Drawing Page(s)		
LINE COUNT:	6596		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Dirigent proteins and pinoresinol/lariciresinol reductases have been isolated, together with cDNAs encoding dirigent proteins and pinoresinol/lariciresinol reductases. Accordingly, isolated DNA sequences are provided from source species Forsythia intermedia, Thuja plicata, Tsuga heterophylla, Eucommia ulmoides, Linum usitatissimum, and Schisandra chinensis, which code for the expression of dirigent proteins and pinoresinol/lariciresinol reductases. In other aspects, replicable recombinant cloning vehicles are provided which code for dirigent proteins or pinoresinol/lariciresinol reductases or for a base sequence sufficiently complementary to at least a portion of dirigent protein or pinoresinol/lariciresinol reductase DNA or RNA to enable hybridization therewith. In yet other aspects, modified host cells are provided that have been transformed, transfected, infected and/or injected with a recombinant cloning vehicle and/or DNA sequence encoding dirigent protein or pinoresinol/lariciresinol reductase. Thus, systems and methods are provided for the recombinant expression of dirigent proteins and/or pinoresinol/lariciresinol reductases.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L21 ANSWER 8 OF 9 USPATFULL on STN

ACCESSION NUMBER: 2001:47816 USPATFULL Full-text

TITLE: Recombinant pinoresinol/lariciresinol reductase, recombinant dirigent protein, and methods of use

INVENTOR(S): Lewis, Norman G., Pullman, WA, United States
 Davin, Laurence B., Pullman, WA, United States
 Dinkova-Kostova, Albena T., Baltimore, MD, United States
 Fujita, Masayuki, Kagawa, Japan
 Gang, David R., Ann Arbor, MI, United States

10/581,576

PATENT ASSIGNEE(S): Sarkanen, Simo, S. Minneapolis, MN, United States
Ford, Joshua D., Pullman, WA, United States
Washington State University Research Foundation,
Pullman, Washington, United States (U.S. corporation)
Regents of the University of Minnesota, Minneapolis,
MN, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6210942	B1	20010403	<--
APPLICATION INFO.:	US 1999-475316		19991230 (9)	
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1999-307653, filed on 7 May 1999			

	NUMBER	DATE	
PRIORITY INFORMATION:	US 1996-30522P	19961108 (60)	<--
	US 1997-54380P	19970731 (60)	<--
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Achutamurthy, Ponnathapu		
ASSISTANT EXAMINER:	Kerr, Kathleen		
LEGAL REPRESENTATIVE:	Christensen O'Connor Johnson Kindness PLLC		
NUMBER OF CLAIMS:	38		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	1 Drawing Figure(s); 1 Drawing Page(s)		
LINE COUNT:	3696		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Dirigent proteins and pinoresinol/lariciresinol reductases have been isolated, together with cDNAs encoding dirigent proteins and pinoresinol/lariciresinol reductases. Accordingly, isolated DNA sequences are provided which code for the expression of dirigent proteins and pinoresinol/lariciresinol reductases. In other aspects, replicable recombinant cloning vehicles are provided which code for dirigent proteins or pinoresinol/lariciresinol reductases or for a base sequence sufficiently complementary to at least a portion of dirigent protein or pinoresinol/lariciresinol reductase DNA or RNA to enable hybridization therewith. In yet other aspects, modified host cells are provided that have been transformed, transfected, infected and/or injected with a recombinant cloning vehicle and/or DNA sequence encoding dirigent protein or pinoresinol/lariciresinol reductase. Thus, systems and methods are provided for the recombinant expression of dirigent proteins and/or pinoresinol/lariciresinol reductases.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L21 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1997:793250 HCAPLUS Full-text
DOCUMENT NUMBER: 128:36141
TITLE: Unambiguous structural probes for non-cyclic
benzyl aryl ethers in soluble lignin samples
AUTHOR(S): Ede, Richard M.; Kilpelainen, Ilkka
CORPORATE SOURCE: Department of Chemistry, The University of Waikato,
Hamilton, N. Z.
SOURCE: International Symposium on Wood and Pulping Chemistry,
8th, Helsinki, June 6-9, 1995 (1995), Volume
1, 487-494. Gummerus Kirjapaino Oy: Jyvaskyla,
Finland.
CODEN: 65KDAY

DOCUMENT TYPE: Conference

LANGUAGE: English

AB A number of two-dimensional NMR expts. were evaluated with respect to their ability to provide unambiguous evidence for the presence or absence of non-cyclic benzyl aryl ether (α -O-4) structures in soluble lignin samples. The most suitable techniques, in terms of both sensitivity and structural information content were the homonuclear Hartmann-Hahn (HOHAHA) and heteronuclear multiple quantum coherence (HMQC) NMR techniques. By spiking an acetylated Pinus radiata MWL sample with an oligomeric α -O-4 model compound, it was possible to determine a detection limit of < 0.3 α -O-4 structures per 100 lignin C9 units. From this, and other work, it can be shown that if α -O-4 structures are present in MWL samples, they are present at a level below the detection limit of both the HOHAHA and HMQC expts. The implications of these results are discussed in terms of lignin biosynthesis and reactivity.

IT 157544-44-0

RL: PRP (Properties)

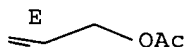
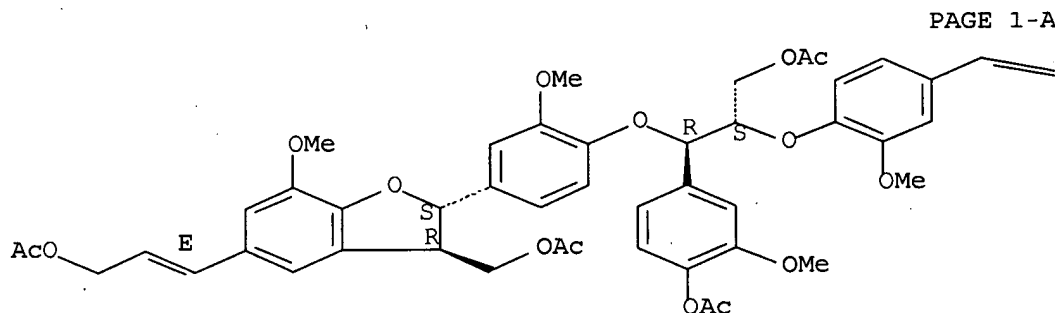
(model compound; structural probes for noncyclic benzyl aryl ethers in soluble lignin)

RN 157544-44-0 HCAPLUS

CN 3-Benzofuranmethanol, 2-[4-[3-(acetyloxy)-1-[4-(acetyloxy)-3-methoxyphenyl]-2-[4-[3-(acetyloxy)-1-propenyl]-2-methoxyphenoxy]propoxy]-3-methoxyphenyl]-5-[3-(acetyloxy)-1-propenyl]-2,3-dihydro-7-methoxy-, acetate, [2 α [1S*,2R*(E)],3 β ,5(E)]- (9CI) (CA INDEX NAME)

Relative stereochemistry.

Double bond geometry as shown.



REFERENCE COUNT:

29

THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

SEARCH HISTORY

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(FILE 'HOME' ENTERED AT 14:21:35 ON 14 NOV 2007)

FILE 'HCAPLUS' ENTERED AT 14:23:58 ON 14 NOV 2007

E JIN MI RIM/AU
 L1 12 SEA ABB=ON "JIN MI RIM"/AU
 E RYU JAE HA/AU
 L2 0 SEA ABB=ON EI2-3
 E CHOI HYOUN JEONG/AU
 L3 2 SEA ABB=ON "CHOI HYOUN JEONG"/AU
 E JUNG HYUN JIN/AU
 L4 28 SEA ABB=ON ("JUNG HYUN J"/AU OR "JUNG HYUN JAE"/AU OR "JUNG
 HYUN JIN"/AU)
 E PARK KYOUNG CHUL/AU
 L5 9 SEA ABB=ON ("PARK KYOUNG CHOL"/AU OR "PARK KYOUNG CHUL"/AU)
 E KIM SUN YOUNG/AU
 L6 233 SEA ABB=ON ("KIM SUN YONG"/AU OR "KIM SUN YOOK"/AU OR "KIM
 SUN YOUNG"/AU)
 L7 0 SEA ABB=ON L1 AND L2 AND L3 AND L4 AND L5 AND L6
 L8 274 SEA ABB=ON L1 OR L2 OR L3 OR L4 OR L5 OR L6
 L9 2 SEA ABB=ON L8 AND ?CUCURBITACEAE?
 SELECT RN L9 1-2

FILE 'REGISTRY' ENTERED AT 14:27:43 ON 14 NOV 2007

L10 9 SEA ABB=ON (110-54-3/BI OR 141-78-6/BI OR 4263-87-0/BI OR
 67-56-1/BI OR 67-66-3/BI OR 71-36-3/BI OR 75-09-2/BI OR
 7732-18-5/BI OR 9014-34-0/BI)

FILE 'HCAPLUS' ENTERED AT 14:27:48 ON 14 NOV 2007

L11 2 SEA ABB=ON L9 AND L10
 L12 ANALYZE L11 1-2 CT : 23 TERMS

FILE 'REGISTRY' ENTERED AT 14:31:04 ON 14 NOV 2007

L13 1 SEA ABB=ON 4263-87-0/RN
 L14 STRUCTURE 4263-87-0
 L15 15 SEA SSS SAM L14
 L16 191 SEA SSS FUL L14

FILE 'HCAPLUS' ENTERED AT 14:32:43 ON 14 NOV 2007

L17 398 SEA ABB=ON L16 OR ?DEHYDRODICONIFERYL?(W)?ALCOHOL?
 L18 3 SEA ABB=ON L17 AND (?OBES? OR ?TYPE?(W) (2 OR II) (W)?DIABETES?
 OR ?STEATOSIS? OR ?HYPERLIPEMIA? OR ?CARD?(W)?DISEAS? OR
 ?ATHEROSCLEROSIS?)
 L19 3 SEA ABB=ON L18 AND (PRD<20060602 OR PD<20060602)

FILE 'USPATFULL' ENTERED AT 14:34:54 ON 14 NOV 2007

L20 6 SEA ABB=ON L18 AND (PRD<20060602 OR PD<20060602)

FILE 'HCAPLUS, USPATFULL' ENTERED AT 14:35:35 ON 14 NOV 2007

L21 9 DUP REMOV L19 L20 (0 DUPLICATES REMOVED)

FILE HOME

FILE HCAPLUS

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FILE USPATFULL

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 13 Nov 2007 (20071113/PD)
FILE LAST UPDATED: 13 Nov 2007 (20071113/ED)
HIGHEST GRANTED PATENT NUMBER: US7296299
HIGHEST APPLICATION PUBLICATION NUMBER: US2007261148
CA INDEXING IS CURRENT THROUGH 13 Nov 2007 (20071113/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 13 Nov 2007 (20071113/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2007
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2007